

WHAT IS CLAIMED IS:

1. A device for creating an end-to-side anastomosis between first and second vessels, the device comprising:

a body, at least a portion of which is fabricated from a sponge material, the body having an opening for insertion of an end of the first vessel therein;

first securing means for securing the first vessel in the opening; and

second securing means for securing a side of the second vessel to the body such that a hole formed in the side of the second vessel is in fluid communication with the end of the first vessel.

2. The device of claim 1, wherein the body is disk-shaped.

3. The device of claim 1, wherein the body is sleeve-shaped.

4. The device of claim 1, wherein the first securing means comprises an adhesive disposed on between an outer surface of the first vessel and a corresponding surface of the opening.

5. The device of claim 4, wherein the first securing means further comprises sealing means for sealing the outer surface of the first vessel against the corresponding surface of the opening.

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6. The device of claim 5, wherein the sealing means comprises a catheter having a balloon, the catheter being disposed in the first vessel such that when inflated, the balloon urges the outer surface of the first vessel against the corresponding surface of the opening to sandwich the adhesive therebetween.

7. The device of claim 1, wherein the second securing means comprises an adhesive disposed between an outer surface of the second vessel and a corresponding surface of the body.

8. The device of claim 7, wherein the adhesive is disposed on at least a first vessel-contacting surface of the opening.

9. The device of claim 8, wherein the sponge material contains pores and the adhesive is further disposed in the pores of the sponge material.

10. The device of claim 1, further comprising an alignment means for aligning the opening with the hole in the second vessel.

11. The device of claim 10, wherein the alignment means comprises a radially compressible member having a cylindrical body embedded in the body circumferentially about the opening, the radially compressible member further having a plurality of pins protruding from the body.

17. The device of claim 16, wherein the body is disk-shaped and having a slot of semicircular cross-section corresponding to each of the first and second vessels for acceptance thereof, each of the slots communicating through the opening.

18. The device of claim 16, wherein at least one of the first and second securing means comprises an adhesive disposed between an outer surface of the first and/or second vessel and a corresponding surface of the body.

19. The device of claim 18, wherein the at least one of the first and second securing means further comprises sealing means for sealing the outer surface of the first and/or second vessel against the corresponding surface of the body.

20. The device of claim 19, wherein the sealing means comprises a catheter having a balloon, the catheter being disposed in the first and/or second vessel such that when inflated, the balloon urges the outer surface of the first and/or second vessel against the corresponding surface of the body to sandwich the adhesive therebetween.

21. The device of claim 18, wherein the sponge material contains pores and the adhesive is disposed in pores of the sponge material.

22. The device of claim 16, further comprising an alignment means for aligning the opening with at least one of the holes in the first and second vessels.

23. The device of claim 22, wherein the alignment means comprises a radially compressible member having a cylindrical body embedded in the body circumferentially about the opening, the radially compressible member further having a plurality of pins protruding from the body.

24. The device of claim 23, wherein at least a portion of the radially compressible member is fabricated from a resorbable material.

25. The device of claim 17, wherein the sponge material is resorbable.

26. The device of claim 17, wherein the sponge material contains pores and the device further comprising a medicating agent disposed in at least a portion of the pores of the sponge material.

27. The device of claim 26, wherein the medicating agent is an anastomosis modulating agent.

28. The device of claim 18, wherein at least one of the first and second securing means comprises an adhesive disposed on a surface of the slot for adhering the first and/or second vessel to the corresponding slot.

29. A method for creating an anastomosis between first and second vessels, the method comprising:

attaching a portion of the first vessel to a body, the

body being at least partly fabricated from a sponge material;

attaching a portion of the second vessel to the body;
and

creating an anastomosis between the portions of the first and second vessels and through an opening in the body.

30. The method of claim 29, wherein the attaching of the portion of the first vessel to the body comprises attaching an end portion of the first vessel to the opening formed in the body and the attaching of a portion of the second vessel to the body comprises attaching a side portion of the second vessel to the body.

31. The method of claim 30, wherein the creating of the anastomosis between the portions of the first and second vessels comprises forming a hole in the portion of the second vessel corresponding to the end of the first vessel and the opening in the body.

32. The method of claim 31, wherein the forming of the hole is subsequent to the attaching of the portion of the second vessel to the body.

33. The method of claim 31, wherein the forming of the hole is prior to the attaching of the portion of the second vessel to the body.

34. The method of claim 29, wherein the attaching of the portion of the first vessel to the body comprises attaching a side portion of the first vessel to the body and the attaching of the portion of the second vessel to the body comprises attaching a side portion of the second vessel to the body.

35. The method of claim 34, wherein the creating of the anastomosis between the portions of the first and second vessels comprises forming holes in the side portions of the first and second vessels corresponding to each other and the opening in the body.

36. The method of claim 35, wherein the forming of at least one of the holes in the side portions of the first and second vessels is subsequent to the attaching of the corresponding side portion to the body.

37. The method of claim 35, wherein the forming of at least one of the holes in the side portions of the first and second vessels is prior to the attaching of the corresponding side portion to the body.

38. The method of claim 29, wherein at least one of the attaching of the portion of the first and second vessels to the body comprises adhering the portion to the body with an adhesive disposed between a corresponding outer surface of the vessel and the body.

39. The method of claim 38, further comprising sealing the corresponding outer surface of the vessel to the body.

40. The method of claim 39, wherein the sealing comprises inflating a balloon in a lumen of the vessel to urge the corresponding outer surface against the body and to sandwich the adhesive therebetween.

41. The method of claim 29, further comprising aligning a hole in one of the first and second vessels with the opening in the body.

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